CLAIMS

1   1.   A method for scheduling a download from a server computer to a client computer

2   comprising steps of:

3   obtaining a first threshold time value;

4   obtaining a second threshold time value; and

5   determining a time for performing a download between the first threshold time

6   value and the second threshold time value.

1   2.   A method according to claim 1, wherein the step of determining a time comprises

2   a sub-step of:

3   selecting a random time between the first threshold time value and the second

4   threshold time value.

1   3.   A method according to claim 2, wherein said sub-step of selecting a random time

2   comprises sub-steps of:

3   selecting a random number; and

4   selecting a random time between the first threshold time value and the second

5   threshold time value, based on the random number, the first threshold time value and

6   the second threshold time value.

1   4.   A method according to claim 1, wherein said step of determining a time

2   comprises sub-steps of:

3   obtaining one or measures of resource availability; and

4   comparing the one or more measures to one or more corresponding preselected

5   limits.

1   5.   A method according to claim 4, wherein said step of obtaining one or more

2   measures comprises a sub-step of:

3   obtaining a measure of ping response time between the client and the server.

1 6.   A method according to claim 4, wherein said step of obtaining one or more

2 measures comprises a sub-step of:

3   obtaining a measure of client computer percentage of CPU utilization.

1 7.   A method according to claim 4, wherein said step of obtaining one or more

2 measures comprises a sub-step of:

3   obtaining a count of the number of downloads currently being performed by the

4 client.

1 8.   A method according to claim 1, wherein the step of determining a time for

2 performing a download comprises sub-steps of:

3   obtaining a plurality of measures of resource availability selected from a group

4 consisting of measures of client computer resource availability and measures of

5 communication resource availability;

6   obtaining a set of weights corresponding to the plurality of measures of resource

7 availability;

8   calculating a weighted sum of the plurality of measures of resource availability

9 using the set of corresponding weights; and

10   comparing the weighted sum to a limit value.

1   9.   A method for scheduling a download from a server computer to a client computer

2   comprising steps of:

3   checking a percentage of CPU utilization;

4   checking a ping response time between the client and the server; and

5   obtaining a count of a number of downloads currently underway.

1   10.   A method according to claim 9, further comprising a step of:

2   obtaining a weight corresponding to the percentage of CPU utilization;

3   obtaining a weight corresponding to the ping response time;

4   obtaining a weight corresponding to the count of the number of downloads

5   currently underway;

6   calculating a weighted sum of the percentage of CPU utilization, the ping

7   response time, and the count of the number of downloads currently underway, using

8   the weight corresponding to the percentage of CPU utilization, the weight

9   corresponding to the ping response time, and the weight corresponding to the count of

10   the number of downloads currently underway; and

11   comparing the weighted sum to a limit value.

1   11.   A computer readable medium containing programming instructions for

2   scheduling a download from a server computer to a client computer the programming

3   instructions comprising:

4   obtaining a first threshold time value;

5   obtaining a second threshold time value; and

6   determining a time for performing a download between the first threshold time

7   value and the second threshold time value.

1   12.   A computer readable medium according to claim 11, wherein the programming

2   instructions for determining a time further includes programming instructions for:

3   selecting a random time between the first threshold time value and the second

4   threshold time value.

1   13.   A computer readable medium according to claim 14, wherein the programming

2   instructions for selecting a random time further includes programming instructions for:

3   selecting a random number; and

4   selecting a random time between the first threshold time value and the second

5   threshold time value, based on the random number, the first threshold time value and

6   the second threshold time value.

1   14.   A computer readable medium according to claim 13, wherein the programming

2   instructions for determining a time further includes programming instructions for:

3   obtaining one or measures of resource availability; and

4   comparing the one or more measures to one or more corresponding preselected

5   limits.

1   15.   A method according to claim 14 wherein said programming instructions for

2   obtaining one or more measures further includes programming instructions for:

3   obtaining a measure of ping response time between the client and the server.

1 16. A computer readable medium according to claim 14, wherein the programming

2 instructions for obtaining one or more measures further includes programming

3 instructions for:

4 obtaining a measure of client computer percentage of CPU utilization.

1 17. A computer readable medium according to claim 14, wherein the programming

2 instructions for obtaining one or more measures includes programming instructions for:

3 obtaining a count of the number of downloads currently being performed by the

4 client.

1 18. A computer readable medium according to claim 11, wherein the programming

2 instructions for determining a time for performing a download comprises programming

3 instructions for:

4 obtaining a plurality of measures of resource availability selected from a group

5 consisting of measures of client computer resource availability and measures of

6 communication resource availability;

7 obtaining a set of weights corresponding to the plurality of measures of resource

8 availability;

9 calculating a weighted sum of the plurality of measures of resource availability

10 using the set of corresponding weights; and

11 comparing the weighted sum to a limit value.

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1 19.   A computer readable medium comprising programming instructions for
2 scheduling a download from a server computer to a client computer including
3 programming instructions for:
4   checking a percentage of CPU utilization;
5   checking a ping response time between the client and the server; and
6   obtaining a count of a number of downloads currently underway.

1 20.   A computer readable medium according to claim 19, further comprising
2 programming instructions for:
3   obtaining a weight corresponding to the percentage of CPU utilization;
4   obtaining a weight corresponding to the ping response time;
5   obtaining a weight corresponding to the count of the number of downloads
6 currently underway;
7   calculating a weighted sum of the percentage of CPU utilization, the ping
8 response time, and the count of the number of downloads currently underway, using
9 the weight corresponding to the percentage of CPU utilization, the weight
10 corresponding to the ping response time, and the weight corresponding to the count of
11 the number of downloads currently underway; and
12   comparing the weighted sum to a limit value.

21.   An information processing system comprising:

a network interface;

a download scheduling intelligent agent for accepting specification from a user of a period during which a download is to be performed, and determining a time within the period for performing the download.